LISTING OF CLAIMS

The listing of claims provided below replaces all prior versions, and listings, of claims in the application.

5   1.   (Currently Amended) A method for processing data to be transmitted on a transmission medium, said method comprising:

a) storing in memory a segment of data to be transmitted wherein said segment of data is larger than the largest size of a single data packet allowed for transmission by said transmission medium;

10   b) processing said segment to produce an array of linked data blocks wherein each data block is smaller than said largest size wherein said b) is performed by a socket layer of a network communication protocol stack;

c) adding a first header to each <u>data</u> block of said array of linked data blocks, wherein said c) is performed by a <u>transmission control protocol (TCP)</u> [[TCP]] layer <u>of</u>
15   <u>the network communication protocol stack</u>;

d) adding a second header to each <u>data</u> block of said array of linked data blocks, wherein said d) is performed by an <u>internet protocol (IP)</u> [[IP]] layer <u>of the network</u>
<u>communication protocol stack, wherein operations c) and d) collectively serve to generate</u>
<u>a separate packet for each data block in the array of linked data blocks, wherein the</u>
20   <u>separate packets for the data blocks are linked to form a packet chain having a packet</u>
<u>sequence corresponding to a linkage sequence of the data blocks in the array of linked</u>
<u>data blocks</u>; and

e) identifying <u>the packetized data</u> blocks of said array to a communication subsystem for communication over said transmission medium.

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2.   (Original)   A method as described in Claim 1 wherein said transmission medium comprises a transmission protocol.

3.   (Original)   A method as described in Claim 2 wherein said transmission protocol is a packetized protocol.

4.   (Original)   A method as described in Claim 3 wherein said packetized protocol is TCP/IP.

5.   (Original)   A method as described in Claim 1 wherein said communication subsystem is a network interface card (NIC).

6.   (Currently Amended) A method as described in Claim 5 wherein said e) comprises identifying said packetized data blocks of said array one data block at a time to said NIC and wherein said e) is performed by said IP layer of the network communication protocol stack.

7.   (Currently Amended) A method as described in Claim 6 further comprising said NIC accessing said one data block at a time and transmitting said one data block at a time as a data packet over said transmission medium.

8.   (Currently Amended) A method as described in Claim 5 wherein said e) comprises identifying at one time all of said packetized data blocks of said array to said NIC and wherein said e) is performed by said IP layer of the network communication protocol stack.

9.   (Currently Amended) A method as described in Claim 8 further comprising said NIC accessing said array and transmitting one <u>data</u> block at a time as a data packet over said transmission medium.

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10.   (Original)   A method as described in Claim 5 wherein said array comprises a plurality of linked messages wherein each message comprises a plurality of linked data blocks and wherein said e) comprises identifying one message at a time to said NIC and wherein said e) is performed by said IP layer <u>of the network communication</u>

10   <u>protocol stack</u>.

11.   (Currently Amended) A method as described in Claim 10 further comprising said NIC accessing each message and transmitting one <u>data</u> block at a time as a data packet over said transmission medium.

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12.   (Currently Amended) A method as described in Claim 5 further comprising said NIC transmitting each <u>data</u> block of said array over said transmission medium one <u>data</u> block at a time as a data packet over said transmission medium.

20   13.   (Original)   A method as described in Claim 1 wherein said a) is performed by an application layer <u>of the network communication protocol stack</u>.

14.   (Original)   A method as described in Claim 1 wherein said first header is a TCP header and wherein said second header is an IP header.

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15.   (Currently Amended) A method as described in Claim 1 wherein each <u>data</u> block of said array is approximately 1,500 bytes in length.

16.   (Currently Amended) A method as described in Claim 1 wherein said <u>data</u> blocks of said array are linked by memory address pointers stored therein.

17.   (Currently Amended) A method for processing data to be transmitted on a transmission medium, said method comprising:

a) storing in memory a segment of data to be transmitted wherein said segment of data is larger than the largest size of a single data packet allowed for transmission by said transmission medium;

b) processing said segment to produce an array of linked data blocks wherein each data block is smaller than said largest size wherein said b) is performed by a socket layer <u>of a network communication protocol stack</u>;

c) adding a <u>transmission control protocol (TCP)</u> [[TCP]] header to each <u>data</u> block of said array of linked data blocks, wherein said c) is performed by a TCP layer <u>of the network communication protocol stack</u>;

d) adding an <u>internet protocol (IP)</u> [[IP]] header to each <u>data</u> block of said array of linked data blocks, wherein said d) is performed by an IP layer <u>of the network communication protocol stack, wherein operations c) and d) collectively serve to generate a separate packet for each data block in the array of linked data blocks, wherein the separate packets for the data blocks are linked to form a packet chain having a packet sequence corresponding to a linkage sequence of the data blocks in the array of linked data blocks</u>; and

e) wherein said IP layer identifies <u>the packetized data</u> blocks of said array to a network interface card (NIC) for communication over said transmission medium.

18.   (Currently Amended)   A   method   as   described   in   Claim   17   further comprising said NIC transmitting each <u>data</u> block of said array over said transmission medium as a data packet one <u>data</u> block at a time.

19.   (Currently Amended) A method as described in Claim 18 wherein said e) comprises identifying said <u>packetized data</u> blocks of said array one <u>data</u> block at a time to said NIC.

20.   (Currently Amended) A method as described in Claim 18 wherein said e) comprises identifying at one time all of said <u>packetized data</u> blocks of said array to said NIC.

21.   (Original)   A method as described in Claim 18 wherein said array comprises a plurality of linked messages wherein each message comprises a plurality of linked data blocks and wherein said e) comprises identifying one message at a time to said NIC.

22.   (Original)   A method as described in Claim 18 wherein said a) is performed by an application layer <u>of the network communication protocol stack</u>.

23.   (Currently Amended) A method as described in Claim 18 wherein each <u>data</u> block of said array is approximately 1,500 bytes in length.

24.   (Currently Amended) A method as described in Claim 18 wherein said <u>data</u> blocks of said array are linked by memory address pointers stored therein.

5   25-36. (Cancelled)

37.   (New) A computer readable storage medium having program instructions stored thereon for processing data to be transmitted on a transmission medium, comprising:

10   program instructions for storing in memory a segment of data to be transmitted wherein the segment of data is larger than the largest size of a single data packet allowed for transmission by a transmission medium;

program instructions for processing said segment to produce an array of linked data blocks wherein each data block is smaller than the largest size;

15   program instructions for receiving an identifier of the array and in response thereto for adding a transmission control protocol (TCP) header to each data block of the array of linked data blocks;

program instructions for receiving the identifier of the array and in response thereto for adding an internet protocol (IP) header to each data block of the array of

20   linked data blocks, wherein adding the TCP and IP headers to each data block serves to generate a separate packet for each data block in the array of linked data blocks, wherein the separate packets for the data blocks are linked to form a packet chain having a packet sequence corresponding to a linkage sequence of the data blocks in the array of linked data blocks; and

program instructions for identifying the packetized data blocks of the array to a communication subsystem for communication over the transmission medium.

38.   (New) A computer readable storage medium as recited in claim 37, wherein the communication subsystem is a network interface card (NIC).

39.   (New) A computer readable storage medium as recited in claim 38, wherein the packetized data blocks are identified to the NIC one data block at a time.

40.   (New) A computer readable storage medium as recited in claim 39, wherein the NIC accesses and transmits one packetized data block at a time over the transmission medium.

41.   (New) A computer readable storage medium as recited in claim 38, wherein all of the packetized data blocks are simultaneously identified to the NIC.

42.   (New) A computer readable storage medium as recited in claim 41, wherein the NIC accesses and transmits one packetized data block at a time over the transmission medium.

43.   (New) A computer readable storage medium as recited in claim 37, wherein the array comprises a plurality of linked messages wherein each message comprises a plurality of linked data blocks.

44.   (New) A computer readable storage medium as recited in claim 37, wherein each data block of the array is approximately 1,500 bytes in length.

45.   (New) A computer readable storage medium as recited in claim 37, wherein the data blocks of the array are linked by memory address pointers stored therein.